

CLAIMS

1. In a vibratory motor having an elongated housing having opposite ends, an electric motor positioned within said housing between said opposite ends, bearings in said opposite ends, a motor shaft extending into said opposite ends and supported by said bearings, eccentric weight chambers in said opposite ends proximate said bearings and between said bearings and said electric motor, the improvement comprising explosion and leak-proof seal assemblies located proximate said eccentric weight chambers and between said eccentric weight chambers and said electric motor, each of said seal assemblies including an oil seal facing an adjacent eccentric weight chamber, and a flame path between said oil seal and said electric motor.

2. In a vibratory motor as set forth in claim 1 wherein each of said explosion and leak-proof seal assemblies comprises an outer rim which is fitted into said housing.

3. In a vibratory motor as set forth in claim 2 wherein each of said seal assemblies includes a face facing its adjacent eccentric weight chamber, and wherein each of said oil seals has an outer surface which does not extend substantially beyond said face toward its adjacent eccentric weight chamber.

4. In a vibratory motor as set forth in claim 3 wherein each of said flame paths is within an elongated boss which extends toward said electric motor.

5. In a vibratory motor as set forth in claim 2 wherein said flame path is located within an elongated boss within said outer rim and which extends toward said electric motor.

6. In a vibratory motor as set forth in claim 5 including an oil seal supported within said outer rim and located between its adjacent eccentric weight chamber and said boss.

7. In a vibratory motor as set forth in claim 6 wherein said oil seal does not extend any substantial distance into said eccentric weight chamber.

8. In a vibratory motor as set forth in claim 1 wherein said vibratory motor includes an oil passage between each of said bearings and said eccentric weight chambers, and wherein said improvement comprises each of said explosion and leak-proof seals including an outer rim which is fitted into said housing.

9. In a vibratory motor as set forth in claim 8 wherein each of said outer rims includes a face facing its adjacent eccentric weight chamber, and wherein each of said oil seals has an outer surface which does not extend substantially beyond said face toward its adjacent eccentric weight chamber.

10. In a vibratory motor as set forth in claim 9 wherein each of said flame paths is within an elongated boss which extends toward said electric motor.

11. In a vibratory motor as set forth in claim 8 wherein said flame path is located within an elongated boss within said outer rim and which extends toward said electric motor.

12. In a vibratory motor as set forth in claim 11 including an oil seal supported within said outer rim and located between said boss and its adjacent eccentric weight chamber.

13. In a vibratory motor as set forth in claim 12 wherein said oil seal does not extend any substantial distance into said eccentric weight chamber.

14. In a vibratory motor as set forth in claim 1 wherein each of said explosion and leaf-proof seal assemblies comprises an outer rim which includes a first portion which is shrunk-fitted into said housing, and a second portion which is bolted to said housing.